

C O P Y

## TRAINING FOR JUNGLE SURVIVAL

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The likelihood of being forced down in the dense and trackless jungles of Latin America holds diminished concern for Air Force pilots and crew members stationed at Albrook Air Force Base in the Canal Zone. When they take off on a routine flight or emergency mission, they know that they are prepared for survival should they be forced to bail out or crash land in the treacherous jungles.

A course in jungle survival now is part of the extensive flying safety program at Albrook. Already 136 officers and airmen have graduated from the special course organized by Lieutenant Alton D. ("Jungle Jim") Slay, flying safety officer. So far neither Lieutenant Slay nor any of the graduates have been forced to use their knowledge - a fact which is a source of satisfaction to the entire command because it reflects favorably on its flying safety record. However, its flying personnel are being prepared for any emergency and the graduates are enthusiastic because they know that their chances of coming out alive are increased many fold.

Lieutenant Slay established the training program about a year ago on his own initiative. Stationed at Albrook since March 1948, he took up jungle exploring as a hobby which developed from a boyhood interest in the swamp areas of his native lower Mississippi River valley. While the school in jungle survival is not actually an indoctrination prerequisite for newly arrived flying personnel at Albrook, it has the approval of the Commanding General, Caribbean Air Command and the Commanding Officer of the base. The Air Force moreover has issued a basic manual on the subject.

There is no mere classroom, notebook and pencil routine about this course. At regular intervals ten to fifteen officers and airmen are flown to Pito, Panama - an abandoned air strip in the heart of the Central American jungle - where they spend a day in the field. Another day is spent on Rey Island, about 90 miles southeast of Albrook.

At Pito may be found some of the world's densest jungles abounding in all types of flora and fauna. In this natural setting, the beginners learn the basic principles of jungle survival. They are taught to identify and prepare the different species of jungle fruits and vegetables, effective techniques for trapping wild animals and fish, how to procure water, build a shelter, make a fire, together with the other rudiments of living off the land. At Rey Island they apply what they have learned at Pito and in addition receive instruction in gathering shell-fish and sea food from the ocean or rivers.

Nobody needs to starve in the jungle, Instructor Slay tell his neophytes. There is always adequate sustenance within easy walking distance but it has to be recognized before it can be exploited. However, the jungle does not cater to clientele with prejudiced palates. A hungry man will find even grubs and snakes edible.

The greatest peril of the jungle is panic. The hardest of men, upon finding themselves cast into a jungle, are subject to a certain degree of shock. The first thing students are told to do is to sit down, take stock of the situation, inventory the survival equipment on hand and work out a plan of action.

Of primary importance is the selection of a good camp site. If the crashed plane is nearby, that will supply shelter unless it is too badly wrecked. Even so, the best plan is to camp close to the wreckage because it can be more easily spotted by rescue missions than a single camp or even a group of men camping together. But if a man is alone, he should select a camp site on a knoll or high ground, being sure the location is dry and as far as possible from pools that breed mosquitoes. He should try to select a spot that will give a chance for a breeze. Parachute cloth draped over a rope or vine supported by two trees will give shelter.

Next comes the need for food and water. Water is not difficult to find and it is fairly plentiful in pools, springs, streams and swamps. However murky, it can always be purified by boiling. Rainwater can be collected in ground holes lined with canvas or parachute cloth. Other sources are green coconuts and the so-called water vine. Vines that have milky sap are liable to be poisonous, however,.

For those equipped with an Air Force "sustenance vest" the problem of survival is greatly simplified. This ingenious article contains just about every necessity to ease the plight of a downed airman. It includes such essentials as a waterproof match box with compass, flint and fire starting tabs, fishing and sewing kits, .45 caliber cartridges, collapsible spit and gaff for roasting and for spearing fish, rations for two days, a plastic water canteen, sun hat, goggles, gloves, mosquito repellent and headnet, first aid kit with bandage and sulfa powder, knives, razor and blades, signal mirror and flares and even a signal whistle. This vest is standard equipment for fliers taking off from Albrook. If a man is forced to bail out in an emergency, he can hit the jungle with something more than a prayer.

But even if an airman should lose the vest or be forced to jump without it, just his parachute, his clothing and the articles in his pockets would be a great help. The parachute can supply shelter and a basin for catching water. The shroud lines will furnish fish lines and snares. Fishhooks can be made from insignia pins. Fire can be made by the ancient method of striking sparks from flint and steel - or even by the Boy Scout friction method. Lenses from cameras or binoculars can be used to create fire from the sun's rays.

For the airman not adept with fishlines and hooks, Lieutenant Slay demonstrates how to use sap of the sandbox tree as a fish-catching device. The sap can be mixed with dirt or sand and strewn on a stream or pond. The poison in the sap paralyzes the fish so that they can be gathered by hand - and the edibility of the fish is not affected. Again, in small streams, traps can be built of stone or sticks and fish can be herded into them and readily scooped up by hand.

Because many of the Latin American jungles abut on the ocean, the second day of the survival course is spent on Ray Island. Here the airman learns that a good meal can be prepared with just a knife and his two bare hands. Snails and clams live in the rocks and mud flats. The sea urchin - a purple or green pincushion-like object - reveals edible red or yellow egg masses when opened. Starfish eggs are also edible. Fried or stewed sea cucumbers offer a change of diet and may be prepared by removing the entrails, scraping the shell and chopping the flesh before cooking. Crabs, lobsters and shrimp are fairly easy to catch with an improvised net or a forked stick.

In gathering fish, Lieutenant Slay always warns, "Don't eat dead shell-fish or the live inhabitants of a dead colony." He also tells how to identify poisonous fish, which are distinguished by the absence of ordinary scales and the presence of rough, spiny scales or thornlike spikes and bony plates. One family of poisonous fish has no scales at all but its members are covered with hairlike bristles. Other characteristics of poisonous fish are enamel-like jaws without distinct teeth, and odd irregular box-like shapes.

Back on land, there are many foods available although, of course, one should not expect the variety obtainable from a well stocked larder. The beginner in jungle lore will find it fairly simple to recognize the edible ferns, purslane, palms, hog plums, wild figs, guava, pita and trumpet fruits. Some 35 species are identified and the students learn how to prepare them.

Nuts, fruits and vegetables are probably the simplest things to identify and to procure in the jungle. The more obvious are easily identified - bananas, wild rice, coconuts and wild yams, to name a few. Coconuts supply both food and drink and the milk is delicious. The airmen learn how to split coconuts. They also learn how to get coffee from a wild bean that very closely resembles that used for the breakfast beverage.

Getting meat, however, is not quite so easy. While all warm-blooded mammals are edible, most of them are hard to catch. Probably the best method for the novice is still-hunting. The men are taught to haunt the trails, watering places and feeding grounds. Downwind spots are the most desirable. Silence and slow movements are essential in bagging any animal and, of course, patience - vast amounts of it. The men are taught how to make snares. Simple snares can be rigged with a slip noose of fine wire or a parachute shroud line. Baited deadfalls of sente or log can be constructed to fall when the bait is pulled.

While most civilized palates may not be exactly tuned to such fare, jungle natives all over the world eat grubs, termites, lizards and snakes. In case of real need, all of these are edible and often easy to find and catch. Lieutenant Slay shows his classes where to look for such provender and how to prepare it. Roast sloth, grub and fern shoot stew, roast termites and broiled iguana (lizard) are a few less glamorous entrees. On the other hand, there are the more savory dishes such as roast conejo (spotted rabbit) with boiled wild rice, purslane, palm heart salad, wild figs, guava, pita and trumpet fruits to titillate the appetite.

These procedures for potential Robinson Crusoes, as taught at the school for jungle survival, would enable men stranded in the jungle to survive for weeks if necessary. Epitomizing the practical nature of the course, one of the school's golden rules is, "Remember, anything a monkey eats, a man can eat".

(See attached table)

Edible Jungle Fruits and Vegetables

<u>Name</u>	<u>Description</u>
CUSTARD APPLE	A fruit two to six inches long, soft and pulpy on the inside with shiny black or brown seeds. Grows on a small tree.
TRUMPET FRUIT	A jungle tree 20 to 30 feet high bears this slender, finger-like fruit about 10 inches long.
CANA BRAVA	Purple black, grows in clusters. Hard seeds can be eaten raw only.
PITA	Fruit similar to pineapple, bright red in color. Common in Panama jungles. Fruit can be eaten cooked or raw and rope can be made from leaves.
PALM HEART	The heart of palm (just above the hard part of the tree) is sweet in taste and edible raw or cooked.
PALMETTO HEART	Common in Panama jungles, this plant is more stringy than palm heart. To prepare, cut palmetto close to ground and shell out tender heart. Eat cooked or raw.
MONKEY PLUM	When ripe, this orange yellow fruit - a relative of the mango - is about one inch long.
PAPAYA	This fruit, similar to canteloupe, grows on a palm-like tree.
CASAVA	Edible roots of a tropical plant.
AVOCADO	Already known in the United States.
PURSLANE	Low spreading plant with fleshy stem and leaves. Edible raw or cooked.
WATER LILY	Found in pools, ponds and streams. Roots and tender leaves are edible.
BAMBOO SHOOTS	Spike-like in shape, these shoots grow from base of the bamboo. Edible raw or cooked.
MANGO LEAF TEA	Mango tree is identified by oblong green, yellow or red fruit. Boil leaves to make tea.